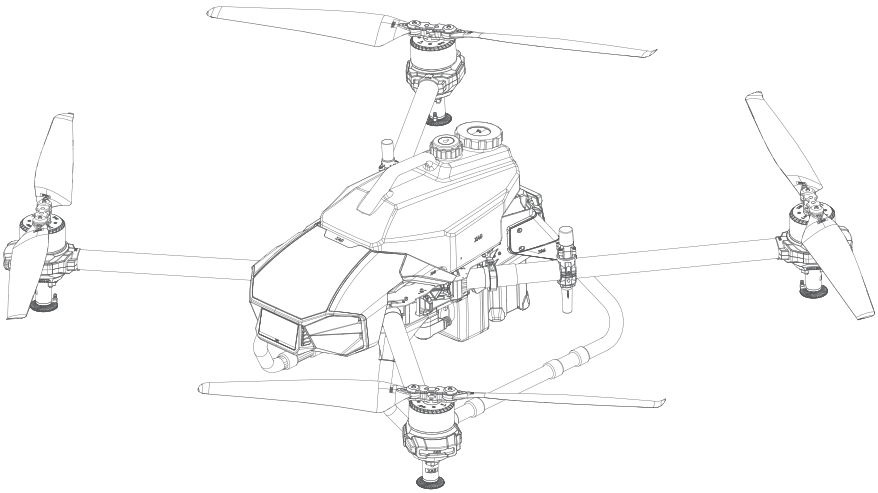


XP 2020

User Manual

Version 1.1 EN

XAG
ADVANCING AGRICULTURE

To Users

Dear user, thank you for choosing XAG products.
For safety purposes and the best experience possible, XAG recommends reading through the User Manual and Disclaimer contained in this document before attempting to use the XP Agricutural UAS 2020.

Click to View

See the contents below for a quick overview of the Manual; in a digital version, click on each title to be redirected to the corresponding page.

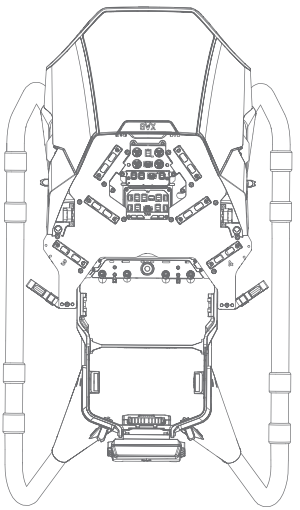
Contact Us

If you have any questions about this document, please contact our Technical Support via email: info@xa.com

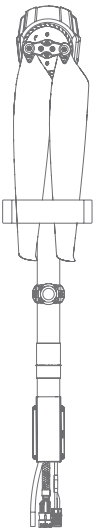
Contents

List of Items

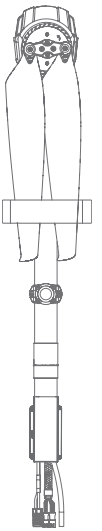
When unpacking the product, please carefully check if it contains all the items listed below. Contact your dealer if there are any missing items.



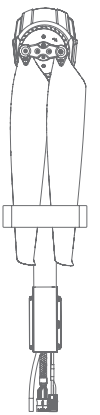
Airframe
×1



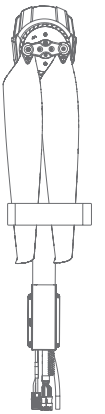
No.4 Arm Module
×1



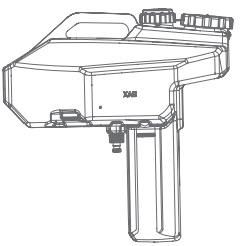
No.3 Arm Module
×1



No.2 Arm Module
×1

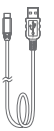


No.1 Arm Module
×1



Automatic Liquid Container (20L)
×2

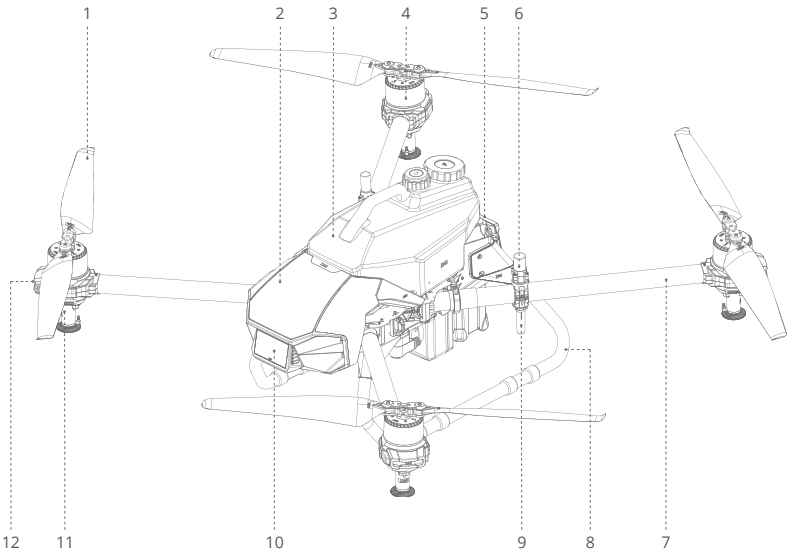
Tool Kit
×1



USB-Type-C Cable
×1

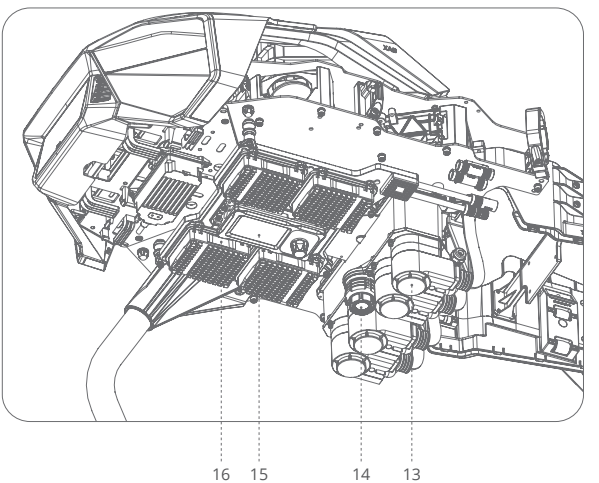
About XP Agricultural UAS 2020

The main structural components of the XP Agricultural UAS 2020 are as follows:



(Above) Figure 1: Airframe Module Structure 1

(Below) Figure 2: Airframe Module Structure 2



1. Propeller
2. Head Cover
3. Liquid Container
4. Motor
5. Smart Battery
6. RTK Antenna (one on each side)
7. Arm
8. Landing Gear
9. 2.4/5.8GHz Dual-frequency Antenna (one on each side)
10. Radar (Front) [1]
11. Nozzle
12. Spraying Status Indicator
13. Peristaltic Pump
14. Search Light
15. Terrain Sensor
16. ESC (Electronic Speed Controller)

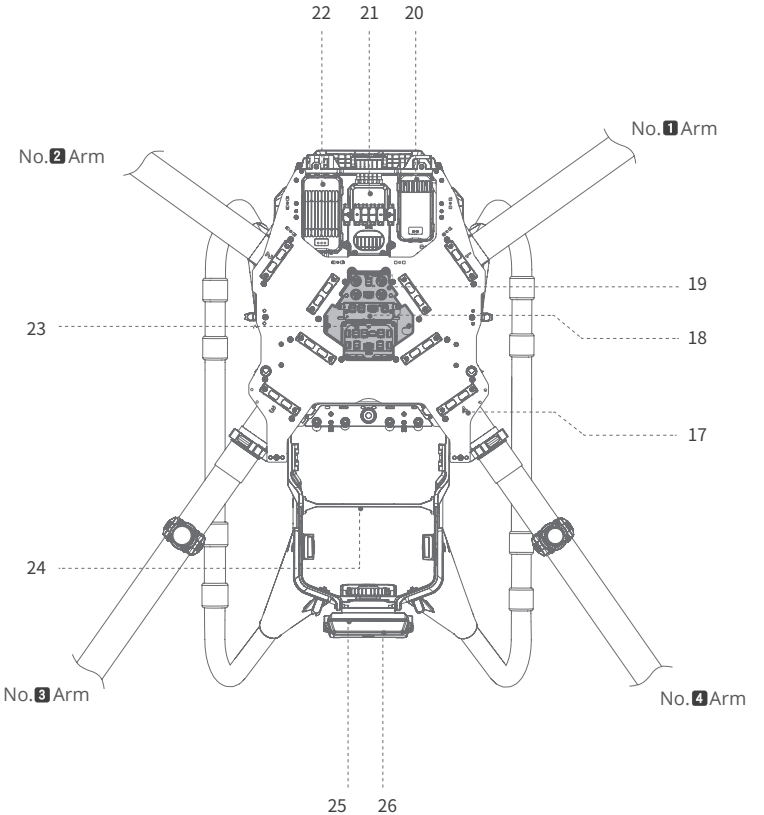


Figure 3: Airframe Module & Arm Position

17 Arm Position Number on Airframe
18 Radar Hub [1]
19 Power Grid Hub
20 RTK Module
21 Flight Controller
22 HDLS Module
23 Spraying Hub
24 Airframe Nameplate (Serial Number/ QR Code)
25 Radar (Rear) [1]
26 Flight Status Indicator Light (Tail Light)

⚠ Warning There are labels on the upper plate of the airframe and the aluminum sleeves of arms. The numbers correspond to the position numbers of arms.

[1] The number of radar modules may vary depending on the UAV Version.

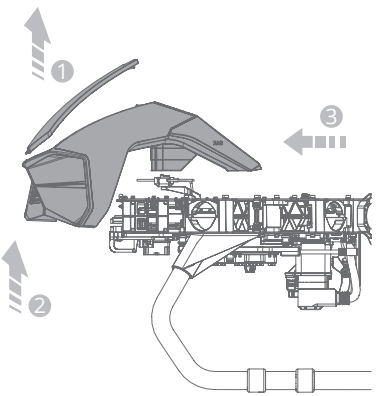
Airframe Assembly

Pre-Assembly Preparations

1.Remove the head cover

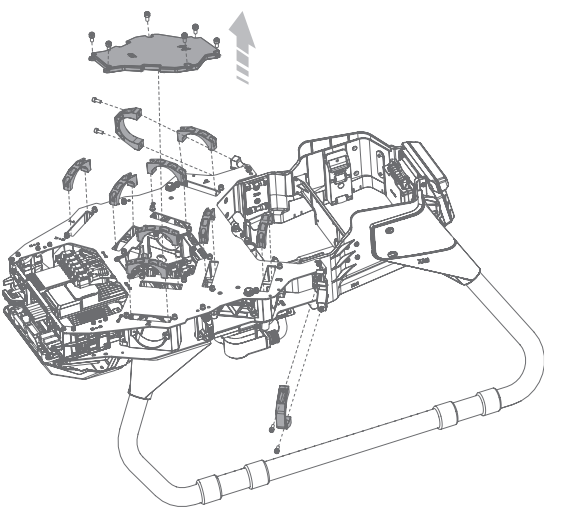
Dismantle the head cover, then lift it from the front, and push the bow cap backwards.

⚠ When pushing the head cover, avoid damaging the terminals of 4G antennas.



2.Disassemble the Arm bracket/Central Hatch Cover

Remove the 8 arm brackets of the arms, 2 side fasteners of arms, and central hatch cover.



Arms Installation

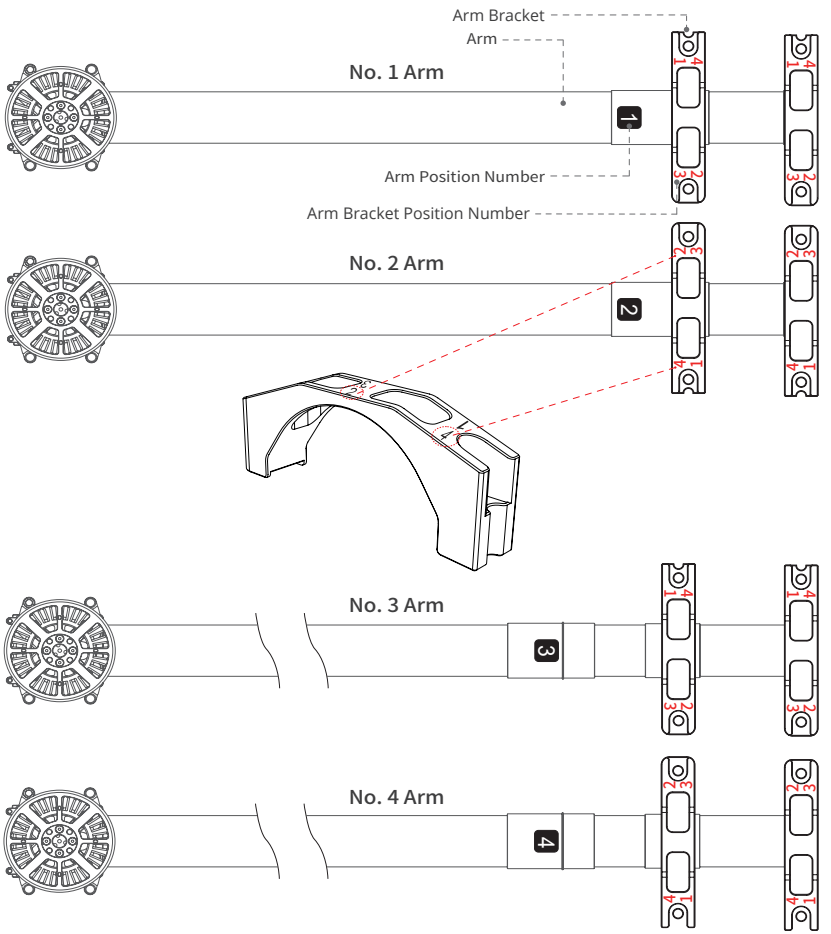
To install the arms' top brackets, please make sure the markings on the aluminum sleeves of arms match with those on top brackets.

a. For Arm No.1 (short), install 1 on the same side as the upper plate of the airframe, and place the arm bracket Position Number "1 & 3" close to the motor.

b. For Arm No.2 (short), install 2 on the same side as the upper plate of the airframe, and place the arm bracket Position Number "2 & 4" close to the motor.

c. For Arm No.3 (short), install 3 on the same side as the upper plate of the airframe, and place the arm bracket Position Number "1& 3" close to the motor.

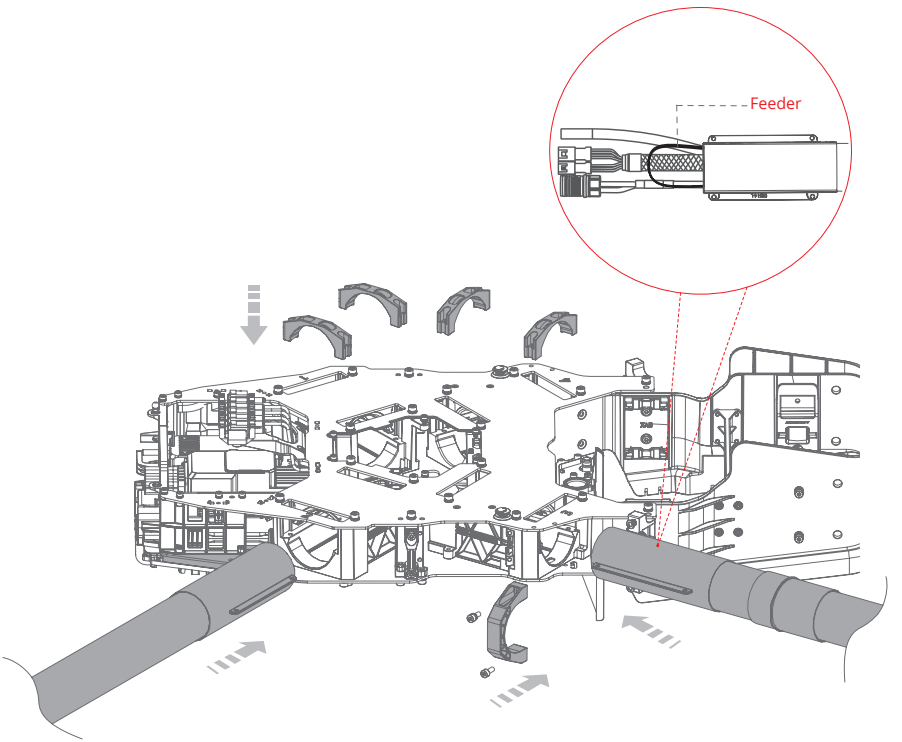
d. For Arm No.4 (short), install 4 on the same side as the upper plate of the airframe, and place the arm bracket Position Number"2 & 4" close to the motor.



⚠ Warning Please ensure that the numerical markings on the bracket match those on the aluminum arm sleeves. Incorrect installation may cause aircraft failure or flight accidents.

1. Install Arms No.2 and 3

Insert the RTK feeder and the 2.4/5.8GHz feeder into Arm No.3, then insert Arms No.2 and 3 Arms into the designated positions of the airframe, and install arm brackets and arm fasteners back to their original positions to complete the assembly (the removal/ installation of Arms No.1/4 is the same as that of Arms No.2/3).

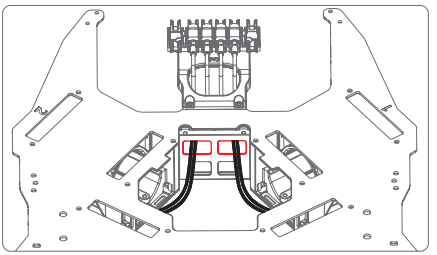


⚠Warning Please ensure that the numerical markings on the upper plate of the airframe match the markings the aluminum arm sleeves (Refer to Page 3, Figure 3: Airframe Module & Arm Position). Incorrect installation may cause aircraft failure or flight accidents.

Tube & Cable Connection

2. Correctly Connect the Circuits and Infusion Tubes

All the plugs of each circuit, the infusion tubes of the spray system, RTK feeders and 2.4/5.8G feeders should be correctly connected. For instructions, see "Wiring Guidelines for Modules" [1] on Page 8 and 9.

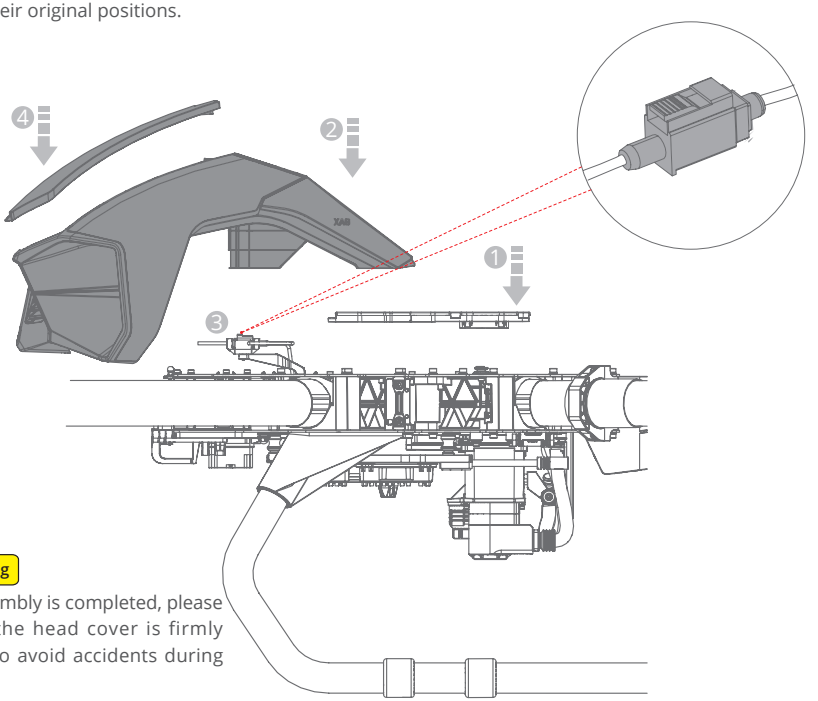


Refer to the left figure to insert the 2.4/5.8G feeders into the holes.

Reassembly of Removed Parts

3. Reinstall the Hatch Cover of Antenna Hub and Antenna Frame Cover

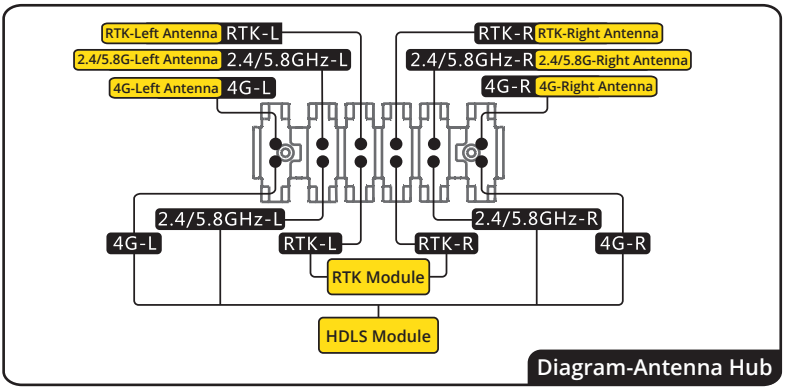
In turn, install the central hatch cover, airframe head cover, 4G feeders, and airframe head cover cap back to their original positions.

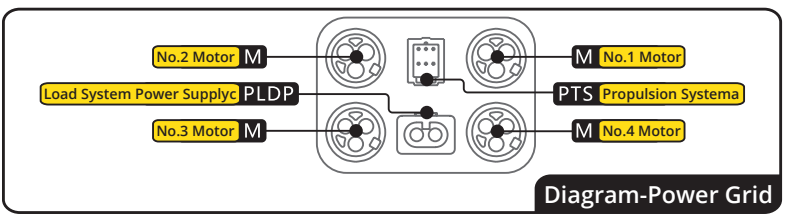


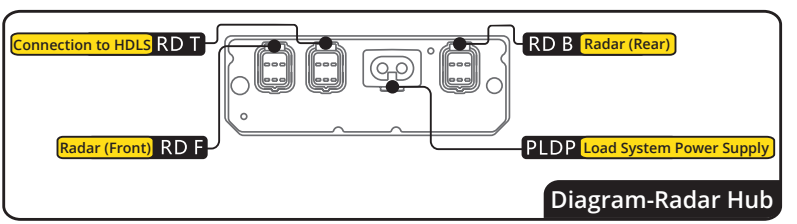
⚠ Warning

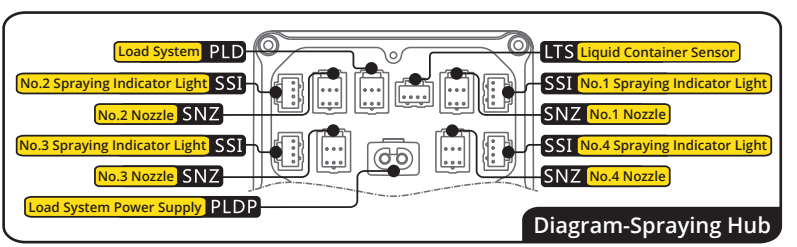
After assembly is completed, please check if the head cover is firmly secured to avoid accidents during flight.

[1]: You can also find the "Wiring Guidelines for Modules" on the back of the head cover.


RTK-Left Antenna
RTK-L
2.4/5.8G-Left Antenna
2.4/5.8GHz-L
4G-Left Antenna
4G-L
RTK-R
RTK-Right Antenna
2.4/5.8GHz-R
2.4/5.8G-Right Antenna
4G-R
4G-Right Antenna
2.4/5.8GHz-L
2.4/5.8GHz-R
4G-L
RTK-L
RTK-R
4G-R
RTK Module
HDLS Module
Diagram-Antenna Hub


No.2 Motor M
M No.1 Motor
Load System Power Supplyc PLDP
PTS Propulsion Systema
No.3 Motor M
M No.4 Motor
Diagram-Power Grid


Connection to HDLS RD T
RD B Radar (Rear)
Radar (Front) RD F
PLDP Load System Power Supply
Diagram-Radar Hub


Load System PLD
LTS Liquid Container Sensor
No.2 Spraying Indicator Light SSI
SSI No.1 Spraying Indicator Light
No.2 Nozzle SNZ
SNZ No.1 Nozzle
No.3 Spraying Indicator Light SSI
SSI No.4 Spraying Indicator Light
No.3 Nozzle SNZ
SNZ No.4 Nozzle
Load System Power Supply PLDP
Diagram-Spraying Hub

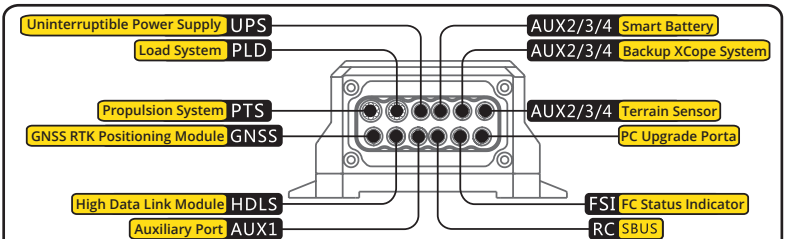
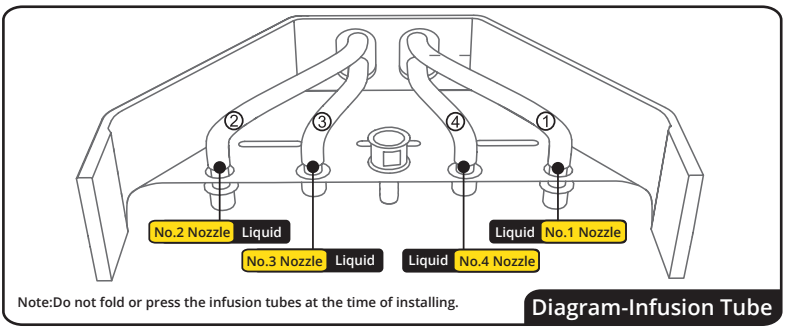


Diagram-Flight Control System



Note:Do not fold or press the infusion tubes at the time of installing.

Diagram-Infusion Tube

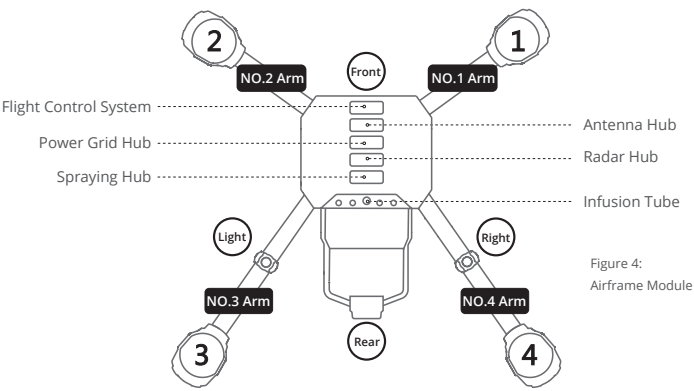


Figure 4:
Airframe Module & Arm Position 2

Note

1. Do not disassemble and assemble any modules while powered on.
2. Turn on the power supply only after all the modules have been installed.

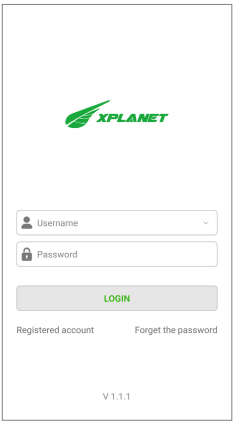
Use Instructions

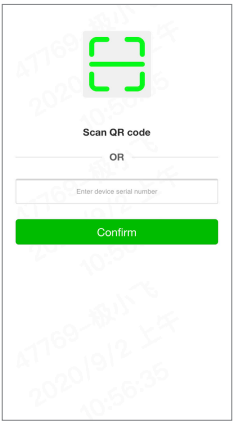
Activation

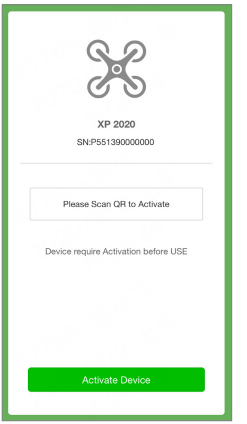
Visit XAG User Registration Website at: https://agri.xaircraft.com/pm/#!/login

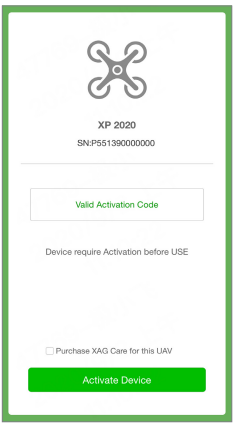
Activation Steps

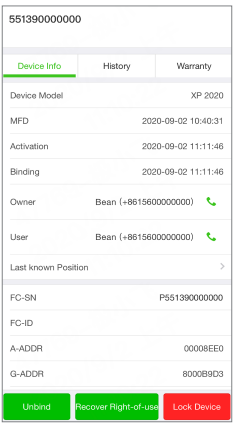
1. Open the "XAgriCentre" app and log in with your User Account Details.
2. Select “Scan QR”, and add your device by either entering the Serial Number or the Scanning the QR Code of the Aircraft (This information could be found on the Airframe Nameplate).
3. Please Scan the QR Code on the Activation Card provided by Official XAG Partners to activate your device.
4. The system will validate your QR Activation Code. Once it is validated, please select Activate Device again to finalize the activation.
5. Your Device is now Activated.











* The QR code and serial number of the airframe can be found in the fuselage carbon frame beam, Please see Page 3, Icon 24 for Reference
* The QR code of activation card can be obtained from your dealer when you purchase the aircraft.

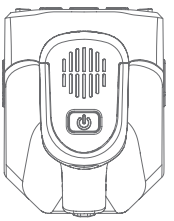
Prepare the Remote Controller

The XAG XP Agricultural UAS 2020 needs to be used together with professional remote controllers and APP. The available control mode combinations include:
① ACB1 CommBack (optional) + Smartphone;
② ACS1 ControlStick (optional);
③ ACS2 ControlStick (optional).

Operation modes vary slightly depending on different remote controllers. Using the ACS2 ControlStick as an example:

• Turning on the ControlStick

Press and hold the Power Button for 2 seconds twice to turn on the device.



• Connect the Device

1. Open your mobile phone, locate the hotspot for the remote control in the Wi-Fi list and enter the corresponding password. (By default, the hotspot name is"ACS2_ XXX", with XXX referring to the serial number indicated on the top of the remote control, and the default password is 20070401.
2. Open the Xplanet App again, and wait for connection.

Download XAG AGRI APP

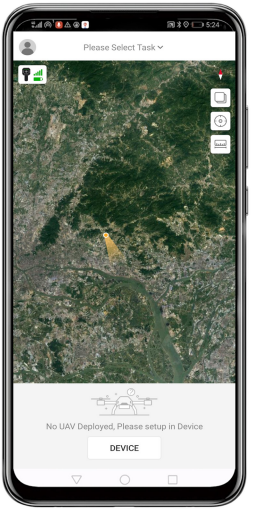
Scan to Download XAG AGRI APP

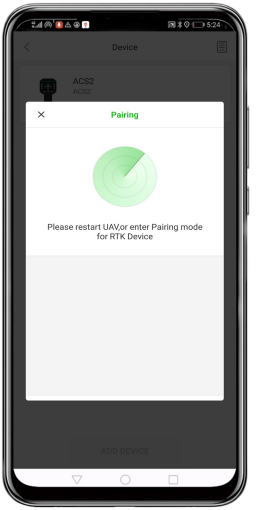
Pair the UAV

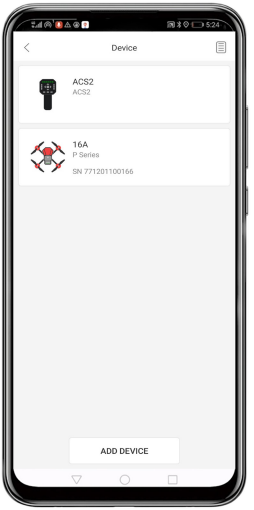
Steps

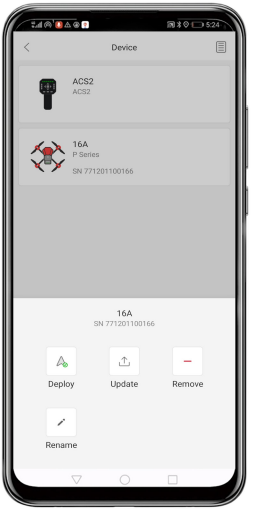
① Once your remote control and smartphone are wirelessly connected via hotspot, open the XAG AGRI APP, and select “Device”;
② Click “Add Device” to start device searching;
③ After the system prompts "Please restart UAV, or enter Pairing mode for RTK Device", restart the UAS for pairing;
④ If successfully paired, a “Successful Pairing” notification will be displayed along with the device, on the interface;
⑤ Check if the UAS is functioning normally by selecting the UAS and "Deploy” button. If “Deploy” is then displayed, it means the device is functioning normally.

Note: Before pairing, please visit the “XAG Service” WeChat mini-program and click "My Device"-"Scan QR Code to Add Device" to scan the QR code printed on the airframe.





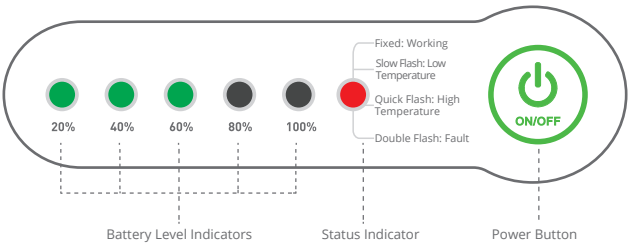




Note: Only devices that have obtained the right to use at the XAG Service mini-program can be successfully paired.

Preparing the Smart Battery

The XP Agricultural UAS 2020 is designed to be powered by B13860S Smart Battery. The Smart Battery contains a power button and six indicator lights.
The buttons/indicator lights are as follows:



• Battery ON/OFF

Power ON: The battery will be powered on after 2 consecutive long presses. When the power is OFF, connect the device, press and hold the power button for at least 1 second, release the power button[1] once all battery level indicator lights start flashing at the same time. Then immediately , press and hold the button for at least 1 second until a beep is heard and the status indicator is on. This indicates that the battery has been successfully powered on.

Power OFF: The battery will be powered off after 2 long presses. When the power is ON, press and hold the power button for at least 1 second, and release the button once all battery level indicator lights start flashing at the same time. Then, press and hold the button for at least 1 second until a beep is heard and the status indicator is off. This indicates that the battery has been powered off successfully.

• Checking Power Level

When the battery is OFF, press the power button once to display the battery level;
When the battery is ON, see the battery indicator lights for the battery level.

Battery Level LED	Status	Description
1 FLASHING LIGHT		0%–10%
1 LIGHT ON		10%–30%
2 LIGHTS ON		30%–50%
3 LIGHTS ON		50%–70%
4 LIGHTS ON		70%–90%
5 LIGHTS ON		90%–100%
2 DOUBLE FLASHING LIGHTS	Self-locked	Battery is locked due to low power level. Please contact customer support to unlock the device.
3 DOUBLE FLASHING LIGHTS	Remotely locked	Battery is locked remotely. Please contact customer support to unlock device.
4 DOUBLE FLASHING LIGHTS	Anti-tamper lock	Battery is disabled. Please contact customer support to unlock device.

[1]Device: Device as UAV or Charger.

Checking Battery Status

Battery Level LED		Status	Description
RED LIGHT ON		Normal	Normal
RED QUICK FLASH		Overheated	Temporarily locked. Prohibited from charging and usage.
RED SLOW FLASH		Low Temperature	Low temperature triggers charging protection. Please keep battery temperature at over 10°C.
RED DOUBLE FLASH		Battery Malfunction	Stop using immediately.

Battery Use Instructions

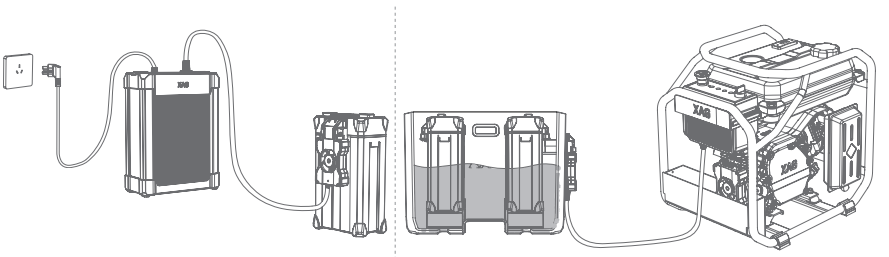
- Do not plug or unplug the battery when it is turned on, otherwise the power connector may be damaged.
- Check the battery's firmware before flight operation. If there is a new version, please update first. Flight accidents caused by the user's failure to update the battery firmware and software will be borne by the user.
- The battery should be used between 10 ℃ and 45 ℃ (ambient temperature). Overheating (>45 ℃) may cause the battery to ignite or explode.
- Do not connect the positive and negative poles of the battery with a wire or other metal objects to avoid short circuiting.
- Do not immerse the battery in a corrosive liquid. When the battery is placed in clean water for heat dissipation, please keep the water level between the Maximum and Minimum markings on the battery. Do not leave the battery in water for more than 60 minutes. Otherwise, the liquid may flow into the battery and cause damage.
- If there is liquid or foreign matter on the battery terminal, wipe it off immediately and keep it clean. Oth- erwise it may cause poor contact, resulting in loss of energy or charging failure.
- Please handle with care during use. Do not disassemble it, puncture its case, or manually press the battery, including but not limited to the following: Sitting on the battery, placing heavy objects on the battery or otherwise putting pressure on the battery.
- Regularly check the battery terminal, plug and other components before use. Do not use alcohol or other flammable agents to clean charging devices. Do not use a damaged charging device.
- When charging, place the battery and charging devices on flat ground that is free of flammable or combustible materials. Battery charging should be watched over to prevent accidents.
- For safety, when charging, a distance of more than 30cm shall be kept between two batteries, or between a battery and a charger, to avoid the malfunction of the charger or the battery, and even serious consequences such as fire due to overheating.
- Before each flight, make sure the battery has a complete charge; never operate with a full load when the battery is not fully charged.
- It is strictly forbidden to use batteries other than those provided by XAG, or to dismantle or replace a battery without authorization. For repairs or replacement, please contact XAG or a designated dealer.The user shall bear the responsibility for battery accidents, flight failures or other accidents caused by the use of batteries not provided by XAG.
- In case of ONE GREEN LIGHT FLASH after a flight, please charge the battery to 40%-60% capacity before storage. Otherwise it may damage the battery. The battery should be recharged and discharged every 90 days to maintain its activity.
- The battery should be stored in a dry environment at a temperature between 10-30°C . Do not place the battery in a location that is too damp or has leakages.
- Do not charge the battery in a damp environment. Product damage caused by liquid immersion due to reasons other than product quality (such as a damaged battery case) is not covered by the warranty.
- The battery has been tested under controlled experimental conditions to be resistant to splashes

and water. However, such protective performance becomes less effective over time, and may diminish due to daily wear and tear.

- The battery has been tested under controlled experimental conditions to be resistant to splashes and water. However, such protective performance becomes less effective over time, and may diminish due to daily wear and tear.
- When the battery is found swollen, leaking, deformed, or damaged, stop using the battery immediately and contact XAG or your dealer promptly.
- The liquid inside the battery is highly corrosive. If it makes contact with your skin or eyes, rinse with clean water and seek medical advice immediately.
- When disposing of the battery, please follow local laws and regulations. Protect the natural environment, and do not discard it irresponsibly.

- **Charging Battery**

When the battery is charging, the battery level indicators corresponding to the current battery level will be on, and the remaining lights will flash in series, indicating that the battery is charging. After charging is completed, the buzzer will beep for 30 seconds. Meanwhile, all battery level indicators will flash for 2 minutes before the battery turns off automatically.



Charging by Intelligent Super Charger

Charging by Auto Super Charge Station

⚠ Warning The battery must be charged with the charging devices designated by XAG. The user shall bear the responsibility for all the consequences caused by the use of the charging devices not designated by XAG.

Charger Status Indicators

Status Type	LED	Status	Description
Power Output	Green Light On	Normal	Normal input
	Green Light Flash	Not Grounded	Charging at risk
	Red Light On	Device Fault	Temporarily locked. Prohibited from output.
	Red Light Flash	Device Overheated	Temporarily locked. Prohibited from output.
Charge Output	Green Light On	Idle	Idle
	Green Light Flash	No Communication	Battery not connected or communication failed.
	Red Light On	Charging	Charging
Charge Port	Green Light On	Normal	Communication succeeded. Charging normally.
	Red Light On	Irregular Communication	Communication between charge port and battery failed.
	Red Light On	Battery Overheated	Battery is overheated.

Charger Use Instructions

- Please keep all battery terminals clean and avoid contact with metal objects.
- If there is any liquid or foreign matter on the charge port, immediately clean and remove the substance. Otherwise it may cause poor contact, resulting in short circuit or charging failure.
- Do not expose the Super Charger to sunlight or rain.
- Do not charge with AC power beyond the rated voltage range. Keep the Super Charger away from flammable and explosive materials when charging, and do not leave it alone while it is being charged.
- If an error or warning is issued during the charging process, please turn the power off immediately, and resume use only after the product has been checked for safety.
- For safety, when charging, a distance of at least 30cm shall be kept between two batteries, or between a battery and a charger, to avoid the malfunction of the charger or the battery, and even serious consequences such as fire due to overheating.
- Regularly check the battery terminals, plug and other components before use. Do not use alcohol or other flammable agents to clean charging devices.
- When the Super Charger is found damaged, stop using immediately and contact XAG or your dealer.
- Do not use damaged chargers. For repairs or replacement, please contact XAG's aftersales or designated dealers.
- Do not use the smart batteries or chargers other than the original ones manufactured by XAG. The user shall bear the responsibility for charging accidents, battery failures, flight accidents or other accidents caused by the use of batteries or chargers not provided by XAG.
- Do not modify or disassemble the Super Charger without permission. The user shall be liable for any consequence caused by the unauthorized modification and disassembly of the Super Charger.
- After use, remove the charge port from the Super Charger, and keep both in a safe and cool place.
- When the Super Charger is found damaged, stop using the battery immediately and contact XAG or your dealer.

Preparing the Liquid Container

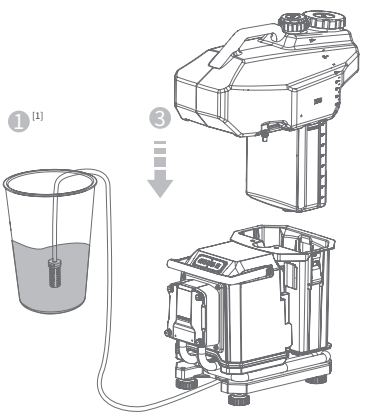
1. Place the liquid inlet tube into a barrel containing prepared liquid.

2. Press the ON/OFF button on the refiller to power the machine on.

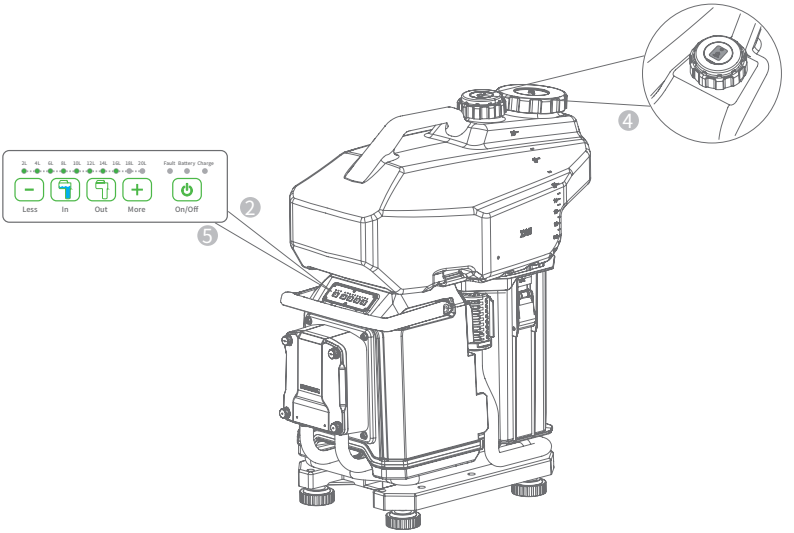
3. Place the container into the refiller. If the container is positioned properly, a beep will be heard from the buzzer.

4. Press the ON/OFF button of the container. When the power indicator is green, the container is ON.

5. Press the Refill button to transfer liquid into the container.



[1]: It corresponds with Step 1 of 5 in total .



Description of Status Indicator/Buzzer

There are 3 indicator LEDs on the Automatic Liquid Refiller, each indicating a status as follows:

Charge	LED Display	Description
	RED LIGHT ON	Charging
	OFF	Charging complete
	RED LIGHT FLASHES	Charging circuit failure or battery overdischarge

Battery	LED Display	Battery Level
	GREEN LIGHT ON	50%-100%
	YELLOW LIGHT ON	25% -50%
	RED LIGHT ON	5%-25%
	RED LIGHT FLASH	Power level lower than 5%. Please recharge in a timely fashion.

Fault	LED Display	Warning/Beep	Description
		Once	The refiller detects that the container has been accurately placed.
	RED LIGHT ON	Twice	The refiller fails to detect the placement of the container when it starts operation.
	RED LIGHT ON	Three times	The refiller fails to connect to the container via Bluetooth when it starts operation.
	RED LIGHT ON	Four times	The float of the container is stuck or the inlet tube or the refiller is blocked.
	RED LIGHT ON	Five times	The refiller detects irregular rotational speed.
		Six times	The refiller has completed the operation.
		Eight times	The filler detects low battery level. The operation is suspended. All indicators flash eight times and the buzzer beeps eight times before refiller turns off automatically. Charge the refiller immediately.

Check the UAV Status

The Flight Status Indicator Lights (Tail lights) indicate the status of the UAV. See the table below for details:

Flight Status Indicator		Status	Description
ONE RED + ONE GREEN LIGHT FLASH		Manual	WEAK GPS SIGNAL
TWO LIGHT FLASHING (Green)			GOOD GPS SIGNAL
THREE LIGHT FLASHING (Green)		Auto	GPS MODE
TWO LIGHT SLOW FLASH (RED)			SAFE MODE
SOLID RED		Abnormal	Flight controller is not initiated yet or is being preheated after being powered on
QUICK FLASH PURPLE			FC Formatted / Abnormal Parameter
QUICK FLASH BLUE			Abnormal power system
QUICK FLASH RED			GPS Error Low Precision Abnormal sensor (Exclude IMU)
QUICK FLASH WHITE			IMU Error
THREE LIGHT FLASHING (RED)		Low Voltage	Low voltage Warning

Check Spray Status

Two Spray Status Indicator Lights (Arm Lights) are located on the side of each motor base, representing the status of corresponding nozzles under each motor. The color of the indicators can be adjusted in the "Plant Protection Operation" APP. Status indicator light definitions are as follows: (using the red light as an example)

Spraying Status Indicator		Description
SOLID		Spray system is Normal
QUICK FLASH		UAV is Taking off / Landing
SLOW FLASH		Spray system is Abnormal observe interface of plant protection operation APP

Firmware Upgrade

Users of XP Agricultural UAS 2020 may upgrade its modules, remote controls and RTK devices via the XAG AGRI APP.

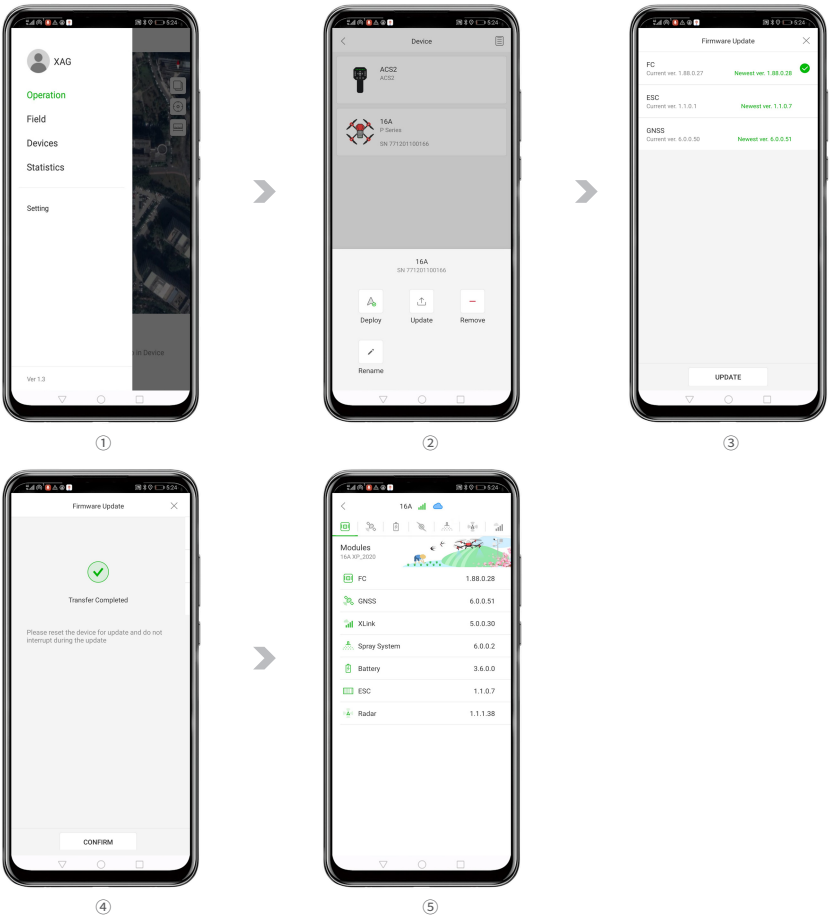
① Click the user portrait on the homepage and select "Device".

② Choose a device (such as the UAS, remote control, RTK device), and click “Update".

③ Select the module to be upgraded and click "UPDATE".

④ Once the firmware transfer is complete, follow the instructions to restart the UAV, and the system will be automatically upgraded. The motor beeps and the white light flashes quickly when the upgrade is in progress. The beeping will stop once the upgrade is complete. (Do not disconnect the smartphone and the remote control while downloading or transmitting data.)

⑤ Visit the module information page to check whether the firmware upgrade was successful.



Technical Specifications

Multicopter Plant Protection UAS

Overall dimensions
1380×1355×552mm (when the propellers are folded, with 20L liquid container)
2195×2210×552mm (when the propellers are unfolded, with 20L liquid container)
Waterproof grade: IP67

Flight Parameters
Empty weight: 19.27kg (w/o battery or operation box)
Rated take-off weight: 46.62kg (w/ battery and full-load operation box)
Maximum effective take-off weight: 48kg (near sea level)
Maximum thrust-weight ratio: 1.9
Load ratio: 0.43
Hovering precision (good GNSS signal):
RTK enabled: ±10cm (horizontal), ±10cm (vertical);
RTK not enabled: ±0.6m (horizontal), ±0.3m (vertical)
(radar function enabled: 0.1m) ±0.1m)
Hovering duration (w/ B13860S Smart Battery):
17min (no-load)
10min (end of spraying in normal operation)
*Measured near sea level, wind speed <3m/s, for reference only
Power battery: B-series Plant Protection Smart Battery is applicable
Maximum flight speed: 12m/s
Maximum acceptable wind speed: 10m/s
Maximum flight altitude: 4000m
Recommended operating temperature: 0°C to~40°C

Spraying System

Sprayer
Model: SNZ-18000A
Number of nozzles: 4
Type: Rotary Atomizing Nozzle
Length of spray rod: 1095mm
Atomizing size: 90-550μm (according to operational requirements)
Spray width: Precision spraying: 4.5m
Quick spraying: 7.0m

Peristaltic Pump
Model: PP-14A
Quantity: 4
Voltage: 42V
Type: Peristaltic Pump
Maximum flow rate (single pump): 1.8L/min
Maximum system flow rate: 7.2L/min

Automatic Liquid Container
Model: LT-4020A
Capacity: 20L
Error range: ±0.25%~2.45%
Material: plastic (HDPE)

Propulsion System

Motor
Model: A20
Dimension (stator): 80×30mm
KV value: 85rpm/V
Rated power: 1500W (single)
Maximum tension: 22.0kg (single)

ESC (Electronic Speed Controller)
Model: VC12100
Maximum operating voltage: 56.5V (13S Lipo)
Maximum continuous operating current: 100A

Foldable Propeller
Model: P40128
Single blade weight: 162g
Gross weight: 440g
Diameter x screw pitch: 40x12.8inch

Obstacle Avoidance System

Terrain Sensor
Model: TR24S30
Power consumption: 5W
Sensing mode: Millimetre-wave
Operating frequency: 24GHz
Height measurement range: 0.5~30m
Fixed height range: 1~30m
Maximum gradient: 45° (at flight speed of 2m/s)

4D imaging radar (front and rear)
*Not included in the Standard Version
Model: RD2447
Power consumption: 4Wx2
Quantity: 2 (front and rear)
Operating frequency: 24GHz
Sensing mode: Millimeter-wave imaging, MTMR
Sensing parameters: obstacle's position, distance, direction of movement, relative speed
Sensing range: ≥1cm@1.5~30m
*Subject to the material, shape, size, position, etc. of the target object
Field of View (FOV): horizontal ±35°, vertical ±35°
Obstacle avoidance direction: Obstacle avoidance based on flight direction (front and rear).
Relative height of safe obstacle avoidance: ≥1.5m
Relative speed of safe obstacle avoidance: ≤8m/s
Distance of safe obstacle avoidance: 2.5m (distance between the tip of the propeller and the obstacle after the UAV brakes and hovers stably)

Communication System

Operating frequency: 2.400~2.4835 GHz
5.725~5.850 GHz
Transmission power (EIRP): 2.400~2.4835 GHz
FCC ≤28dBm
CE ≤20dBm
SRRC ≤20dBm
MIC≤20dBm

5.725~5.850GHz
FCC ≤31dBm
CE ≤14dBm
SRRC ≤27dBm
Maximum effective signal range (near ground level):
2.400~2.483GHz
FCC ≤2000m
CE ≤1000m
SRRC ≤1000m
MIC≤1000m

5.725~5.850 GHz
FCC ≤2000m
CE ≤300m
SRRC ≤1300m

* The data (parameters, etc.) indicated in this Manual are based on the best flight status of the product which is subject to the comprehensive conditions in actual use scenarios.

* Transmission distances vary from ground communication devices. The maximum effective signal ranges are measured when WG1, ACB1, and ACS2 devices are operating in an ideal environment without interference and obstruction.

Other Features

Maximum Operating efficiency: 17.7ha/h (Subject to operation conditions)
High-precision radar: safe and autonomous obstacle avoidance
AI intelligent engine 3D operation planning: Supported
High-precision flow measurement: Supported
Hot swap of liquid container/ battery: Supported
Swarm Operation: Supported
Dual engine RTK technology: Supported
GNSS redundant backup: Supported
Variable-rate spraying (dynamic liquid control technology): Supported

Disclaimer

01. Please read this document carefully before using this product. This Disclaimer has an important impact on the safe use of the product and your legitimate rights and interests. The use of the product shall be deemed as you having known, understood, acknowledged, and accepted all terms and contents of this document.

02. This product is not a toy, and the use of the UAV comes with certain safety risks. It is not suitable for people under the age of 18 or those who have not obtained the UAV operator certificate recognized by XAG (or existing laws, regulations, and policies). Please keep this product away from the reach of children and be very careful when operating in the presence of children.

03. This product is a multi-functional, unmanned aerial system designed for agricultural use. Please read this document and the "Product Manual" carefully before using the product to understand your legitimate rights, interests, responsibilities, and safety instructions; otherwise, it may cause property damage, accidents, and personal safety risks.

04. The user agrees to use the product only for the purpose of which it is intended and agrees to these terms and to any relevant policies or rules that may be established by XAG. Users know, understand, and accept that this product will automatically upload and save relevant flight records and data to XAG servers during use. In the event that the flight records and data fail to be uploaded and saved and XAG fails to analyze the flight records and data due to any reason of the user, XAG will not assume any responsibility.

05. To the maximum extent permitted by law, XAG does not under any circumstances provide any warranty, express or implied, with respect to the products, including but not limited to implied warranties of merchantability, fitness for a particular use, or non-infringement.

06. To the maximum extent permitted by law, XAG shall not be liable for all losses caused by users' failure to use the product in accordance with this document and the "Product Manual". XAG shall not be liable for any indirect, consequential, punitive, contingent, special, or penal damages, including any losses incurred as a result of your purchase, use, or inability to use the product (even if the possibility of such losses has been identified).

07. To the maximum extent permitted by law, the liability or amount of XAG under any circumstances to you for all damages, losses, and litigation arising therefrom will not exceed the amount paid to XAG by you for the purchase of the product.

08. In any case, the purchaser or user shall comply with relevant laws and regulations of the country and region where the product is used. XAG does not assume any liability arising from violation of relevant laws and regulations by the purchaser or user.

09. As laws in some countries may prohibit exemptions from liability clauses, your rights in different countries may vary. This does not mean that the contents of this Disclaimer are necessarily invalid.

10. To the extent permitted by law, XAG has the final right to interpret and modify the above terms. XAG has the right to update, modify, or terminate these terms through its official website, the "Product Manual/ Operation Manual", online APP and other means without prior notice.

Warning

Users are required to read the complete "Product Manual" and obtain UAS operator certificate recognized by XAG (or existing laws, regulations, and policies). Otherwise, it may cause serious injury to yourself or others, or cause product damage and property loss. Strong safety awareness is required to operate this product. This product is not suitable for children. Do not use the parts that are not provided or suggested by XAG. Please strictly follow the instructions of XAG to install and use the product.

Flight Safety Instructions

- Receive UAV operational training courses and obtain a corresponding UAS operator certificate before any operation.Unqualified users are not allowed to operate this product without authorization.
- Ensure that all flights are carried out in an open and familiar area, avoid obstacles and crowds, and beware of all risks.
- Do not operate the UAV in case of fatigue, after drinking or in poor conditions.
- Keep away from heat sources to avoid damage to electronic equipment or other components.
- Do not operate alone as a beginner. It is recommended to get help from an experienced operator before operation.
- Operate within the safe take-off weight. Do not overload the machine to avoid danger.
- Please conduct a Pre-flight Check to ensure that the device is normal and there is no frequency interference.
- Maintain a proper distance from the UAV during operation. Do not touch the propeller with your body or any other body parts. Do not wear loose clothes during flight to avoid injury caused by the propeller.
- For safety reasons, it is recommended that the propeller not be installed during the Pre-flight Check of the airframe, motor, and remote control device. The propeller should only be mounted after the check.
- It is strictly forbidden to conduct obstacle avoidance tests with a human body or animal (regardless of motionless or moving) and any object as obstacle. It is strictly forbidden to directly obstruct, interfere, or impact the UAV with your body, animals, or objects.
- Promptly stop the UAV and perform a return flight in the case of gale or other strong weather changes such as rain, snow, hail, etc.
- Strictly abide by local laws and regulations regarding UAV flight, and operate the product within the flying height and area specified by law.

Real-name Registration (China Only)

In order to strength the management of civil UAVs, Civil Aviation Administration of China (CAAC) has issued the Regulations on Real-name Registration of Civil Unmanned Aerial Vehicles, which requires the owners of civil UAVs to register in real name at uas.caac.gov.cn and attach the registration marks to the UAVs. Failure to comply with the Regulations is subject to punishment by regulatory authorities in accordance with relevant regulations.

Scan by WeChat for more details

XP-Series UAV Systems include supporting modules such as Airframe, Remote Controller, Battery, Operation Box, Liquid Refiller, Charger, RTK Rover, SuperCharge Station, etc. Users may also check the "User Manuals" of the modules for a better use experience of the system.

Visit our website (www.xa.com/en) for more information
www.xa.com

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XAG
ADVANCING AGRICULTURE

This Manual is subject to upgrade without prior notice.